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# Public Health Reports

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A Report on Medical and Dental Care by State Agencies  
Anopheline Survey of the Okefenokee Swamp, Georgia  
Report on Market-Milk Supplies of Certain Communities



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# Public Health Reports

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## DISTRIBUTION OF HEALTH SERVICES IN THE STRUCTURE OF STATE GOVERNMENT \*

### CHAPTER VI—MEDICAL AND DENTAL CARE BY STATE AGENCIES

By JOSEPH W. MOUNTIN, *Assistant Surgeon General*, and EVELYN FLOOK, *United States Public Health Service*

In this article—the sixth chapter of the third edition of Public Health Bulletin No. 184, "Distribution of Health Services in the Structure of State Government"—attention will be devoted to a group of health activities in which medical or custodial care is the dominant element. Those included are psychiatric services, services to crippled children, general and other allied special medical care, and dentistry. It is recognized, of course, that certain health functions to which separate chapters have been devoted, such as those for communicable diseases, tuberculosis, venereal diseases, and maternity and child health, also may contain large elements of medical care. Because the medical benefits involved in provisions for workingmen's compensation are restricted to a selected population group and not applicable to the general population, these, too, will be treated separately.

The method of presentation selected for material included in this chapter as well as others of the series was determined in part by the professional skills involved, but more particularly by the prevailing scheme of administration under which the several services operate. Although stated in each of the preceding chapters, it is necessary to

\*From the States Relations Division. This is the first section of the sixth chapter of the third edition of Public Health Bulletin No. 184. The three remaining sections of this chapter, Medical Care for General and Allied Special Conditions, Dental Services, and Expenditures for Medical and Dental Care, will be published in the next issue of PUBLIC HEALTH REPORTS. Previous chapters are:

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter I. The composite pattern of State health services. Pub. Health Rep., 56: 1673 (August 22, 1941). Reprint No. 2306.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter II. Communicable disease control by State agencies. Pub. Health Rep., 56: 2233 (November 21, 1941). Reprint No. 2334.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter III. Tuberculosis control by State agencies. Pub. Health Rep., 57: 65 (January 16, 1942). Reprint No. 2348.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter IV. Venereal disease control by State agencies. Pub. Health Rep., 57: 553 (April 17, 1942). Reprint No. 2369.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter V. Sanitation by State agencies. Pub. Health Rep., 57: 885 (June 12, 1942); and 917 (June 19, 1942). Reprint No. 2386.

Succeeding chapters will be published in subsequent issues of the PUBLIC HEALTH REPORTS.

repeat for the purpose of emphasis that all data presented in the current revision of Public Health Bulletin 184 pertain to a 12-month period ending during the calendar year 1940 and describe services performed by departments of the State government. The work of voluntary agencies and of local political subdivisions within the State did not fall within the range of the survey.

#### PSYCHIATRIC SERVICES

From the standpoints of budget and beneficiaries, psychiatric care is the most prominent among services of State governments which are to be described in this chapter. The total annual outlay for State psychiatric services is in the neighborhood of 145 million dollars. By far the larger part of this amount is devoted to the care of patients in mental institutions, who number approximately one-half million. The ancillary services, commonly spoken of as mental hygiene, are diffused through social effort of many types; hence they are difficult to evaluate in terms of costs or beneficiaries. Some measure of diffusion of administrative responsibility for psychiatric service among the agencies of State government may be expected because of the numerous avenues of approach to the problem; but, as in the case of public health organization in general, dispersion in this particular category is greater than might reasonably be considered consistent with efficient operation. When pursuing this point through the data presented in table 1, the reader must bear in mind that he is viewing only a partial picture, since the basic survey did not encompass the activities either of voluntary agencies or of local political units.

From the standpoint of all States<sup>1</sup> and all psychiatric services, it will be noted that activities which relate to mental disorders are concentrated within a single agency in only about one-third of the States. The predominating administrative agency is the one variously classified as "State board of control, hospital board or commission, department of institutions, or State eleemosynary board." The department of welfare also is outstanding among the various participating agencies. cursory inspection of table 1 would indicate that the maximum dispersion of State responsibility for psychiatric services involves four official State agencies, and that this occurs only twice. Careful study points to still more scattered responsibility, however, for the single classification "independent State hospital" sometimes represents as many as four different control units. In nine jurisdictions no central administrative body is charged with operation of State mental hospitals, but each separate institution is administered by its own board of trustees or managers who are entirely responsible and operate in complete independence of each other. In a tenth State, the

<sup>1</sup> The term "State" as used in the discussion which follows includes the States, the Territories, the District of Columbia, and the Virgin Islands.



mental hospitals are centrally administered, but the institution for the feeble-minded is operated independently.

TABLE 1.—Official State agencies participating in psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands\*

State or Territory	Department of State government							
	Health	Welfare	Department, board, or commission of mental hygiene	Board of control, State hospital board, department of institutions, eleemosynary board, etc.	Independent State hospital	Board of eugenics control, board of sterilization	State university or college	State legislature
Alabama				X				
Arizona				X		X		
Arkansas				X				
California				X	X <sup>a</sup>		X	
Colorado		X			X <sup>b</sup>	X		
Connecticut	X	X			X <sup>c</sup>			
Delaware				X				
District of Columbia	X	X						X
Florida				X				
Georgia		X				X		
Idaho		X						
Illinois		X						
Indiana		X		X		X		
Iowa		X				X		X
Kansas		X						
Kentucky	X	X			X <sup>b</sup>			
Louisiana				X				
Maine <sup>d</sup>	X				X			X
Maryland	X		X					
Massachusetts			X				X	
Michigan		X		X			X	
Minnesota				X				X
Mississippi				X				
Missouri				X		X		
Montana				X				
Nebraska				X				
Nevada				X				
New Hampshire		X			X <sup>e</sup>			
New Jersey	X			X	X <sup>e</sup>			
New Mexico								
New York			X					
North Carolina		X			X <sup>b</sup>	X		
North Dakota				X		X		
Ohio		X						X
Oklahoma				X				
Oregon				X		X	X	
Pennsylvania		X						X
Rhode Island	X	X			X <sup>a</sup>			
South Carolina	X					X		
South Dakota				X				
Tennessee	X			X				
Texas	X			X				
Utah					X <sup>a</sup>			
Vermont		X	X					
Virginia		X		X			X <sup>e</sup>	
Washington	X			X		X		
West Virginia	X			X				
Wisconsin		X					X	
Wyoming				X				
Alaska								
Hawaii	X			X				
Puerto Rico	X					X		
Virgin Islands	X							

\*Any differences between information presented in this table and corresponding entries in table 1, ch. I, of this series are the result of combining several activities originally shown separately or of further refinement of the data since publication of the initial article.

<sup>a</sup> Three agencies of this classification participate in medical care of mental disorders.

<sup>b</sup> Four agencies of this classification participate in medical care of mental disorders.

<sup>c</sup> Two agencies of this classification participate in medical care of mental disorders.

<sup>d</sup> The department of health is really a bureau of public health subordinate to the department of health and welfare.

Although it is not the purpose of table 1 to disclose the manner in which each agency operates, it might be said at this point that interest of the State health department is usually centered in prevention and early treatment of mental disorders, through field services rather than in prolonged hospital care.

Hospitalization of mental patients on a free or part-pay basis is the State's foremost approach to the problem of mental disorders. With the single exception of the Territory of Alaska, every jurisdiction operates one or more hospitals for the care of persons who are mentally ill. Moreover, the aggregate bed capacity of State mental hospitals surpasses the number of mental beds provided under any other auspices. This prominent position of State control in the mental hospital scene was stressed in a report published by the United States Public Health Service in 1938.<sup>2</sup> According to data presented therein, which applied to the year 1936, 84 percent of all mental hospital beds were located in State-owned mental hospitals. This being true, brief consideration of the relationship between population and availability of State mental hospital beds in 1940 is in order. There is wide variance among the States in the proportionate number of beds provided. For every 1,000 inhabitants, one State maintains as many as 6.6 beds, while another has as few as 0.5. The median State supports 3.3 beds per 1,000 population, while in the middle 50 percent of the jurisdictions the number ranges from 2.4 to 4.2. States having a relatively high proportion of urban population have more facilities for care of mental patients than do those which have a population that is largely rural.

In order of frequency, administration of State mental hospitals is delegated first to a board of control, department of institutions, eleemosynary board, or board of charities and correction; second, to the department of welfare; and third, to independent boards of trustees, directors, or managers. These arrangements exist in 25, 12, and 9 States, respectively. (See table 2.) A department of mental hygiene operates the State mental hospitals in 3 of the remaining States, and the health department is responsible for hospitalization of the mentally ill in an equal number. However, in one of the latter jurisdictions, the District of Columbia, mental hospital facilities referred to are operated as part of a general hospital and not as a separate institution. This ward represents only a minor fraction of the total mental beds available, for operation of the principal mental hospital is a function of the Federal, not the District, Government. In Colorado a small psychopathic hospital is operated as an adjunct to the general hospital of the State university. This facility is in addition to the

<sup>2</sup> Mountin, Joseph W., Pennell, Elliott H., and Flook, Evelyn: Hospital facilities in the United States I. Selected characteristics of hospital facilities in 1936. Public Health Bulletin No. 243. United States Government Printing Office, Washington, 1938.

main State mental hospital which is administered by an independent board of trustees. The health department of Hawaii supplements facilities of the department of institutions by providing a few beds in connection with a mental hygiene clinic. As mentioned previously, no mental hospital is maintained by the Territory of Alaska. Here, mental cases are committed at Federal expense to a Federally-owned mental hospital located in the State of Oregon.

TABLE 2.—*Department of State government\* responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands*

Activity	State or Territory						
	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware District of Columbia
Promulgates and/or enforces State laws, rules, and regulations	4	4, 6	4	4	2, 5 <sup>b, 7</sup>	1, 2, 6	4, 5 <sup>c</sup>
Promotes local mental hygiene programs						1	5
Conducts educational programs:							
For the general public						1	5
For physicians							5
For nurses							
For school teachers and/or teacher-training students							
Supervises and/or provides consultation service to local organizations		4			2, 7	1	5
Furnishes financial aid to local mental hospitals							1
Operates a direct service program:							
Operates mental hospitals	4	4	4	4	5, 7	5 <sup>b</sup>	5
Maintains a follow-up service for paroled or discharged patients				4	7	5 <sup>b</sup>	5
Operates institutions for the feeble-minded	4		4 <sup>t</sup>	4	5 <sup>c</sup>	5	5
Maintains separate facilities for epileptics						5	
Hospitalizes drug addicts and/or alcoholics		4	4	4	5 <sup>a</sup>	5	5
Licenses or approves private institutions for the insane or feeble-minded				4		1	1, 9
Operates mental hygiene clinics—							
Mobile				4	2, 7		
Stationary				4	7	1, 5 <sup>c</sup>	5
Child guidance					2, 7	1	5
General				4	7	5 <sup>c</sup>	5
Diagnostic and treatment				4	2, 7	1, 5 <sup>a</sup>	5
Diagnostic only							
In connection with out-patient departments of State mental hospitals				4	7	5 <sup>c</sup>	5
Independent of State mental hospitals					2, 7	1	
Makes individual examinations upon request		4					
Provides follow-up service after clinic or individual examination				4	2, 7	1	
Makes psychometric or psychiatric examinations of school children						1	5 <sup>a</sup>
Provides psychiatric services for the courts	4					1	5
Makes special studies to determine incidence, cause, and/or treatment of mental disorders						1	
Renders additional service not covered in this classification	4	4, 6		4		5, 6	4, 5

See footnotes at end of table.

TABLE 2.—Department of State government responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky
Promulgates and/or enforces State laws, rules, and regulations.....	4	2, 6	2, 6	2	2	2, 4, 6	2, 6	2
Promotes local mental hygiene programs.....		2		2	2			1, 2
Conducts educational programs:								
For the general public.....					2			
For physicians.....					2			
For nurses.....								
For school teachers and/or teacher-training students.....				2				
Supervises and/or provides consultation service to local organizations.....		2		2	2	4		1, 2
Furnishes financial aid to local mental hospitals.....							8	
Operates a direct service program:								
Operates mental hospitals.....	4	2	2	2	2	4	2	2
Maintains a follow-up service for paroled or discharged patients.....				2	2		2	2
Operates institutions for the feeble-minded.....	4	2	2	2	2	4	2	2
Maintains separate facilities for epileptics.....				2		2		
Hospitalizes drug addicts and/or alcoholics.....	4	2*	2	2*		4*		2
Licenses or approves private institutions for the insane or feeble-minded.....				2			2	
Operates mental hygiene clinics—								
Mobile.....				2	2		2	
Stationary.....				2				
Child guidance.....				2	2		2	
General.....					2		2	
Diagnostic and treatment.....				2	2		2	
Diagnostic only.....								
In connection with out-patient departments of State mental hospitals.....				2	2		2	
Independent of State mental hospitals.....				2	2			
Makes individual examinations upon request.....		2				2, 4		
Provides follow-up service after clinic or individual examination.....					2	2, 4		
Makes psychometric or psychiatric examinations of school children.....		2*			2			
Provides psychiatric services for the courts.....							2	
Makes special studies to determine incidence, cause, and/or treatment of mental disorders.....		2						1
Renders additional service not covered in this classification.....		6	6	2	2	4, 6	2, 6	

See footnotes at end of table.

TABLE 2.—Department of State government responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Promulgates and/or enforces State laws, rules, and regulations	5 d	4	3	3	4	2, 7	4	4
Promotes local mental hygiene programs			1, 3	3				
Conducts educational programs:								
For the general public			1, 3	3				
For physicians								
For nurses								
For school teachers and/or teacher-training students				3				
Supervises and/or provides consultation service to local organizations			3	3	4			
Furnishes financial aid to local mental hospitals			8		4			4
Operates a direct service program:								
Operates mental hospitals	5 b	4	3	3	4	2	4	
Maintains a follow-up service for paroled or discharged patients		4	3	3	4	2		4
Operates institutions for the feeble-minded	5	4	5	3	4	2	4	4
Maintains separate facilities for epileptics				3	4	2		
Hospitalizes drug addicts and/or alcoholics	5 e	4	3	3	4	2	4	4
Licenses or approves private institutions for the insane or feeble-minded		1	3	3	4			
Operates mental hygiene clinics—								
Mobile			1, 3	3				
Stationary	5 e			3	4	7		
Child guidance			1, 3	3	4			
General	5 e		1, 3	3	4	7		
Diagnostic and treatment			1, 3	3	4	7		
Diagnostic only	5 e							
In connection with out-patient departments of State mental hospitals	5 e			3	4			
Independent of State mental hospitals			1, 3	3	4	7		
Makes individual examinations upon request						2	4	
Provides follow-up service after clinic or individual examination				3	4 e			
Makes psychometric or psychiatric examinations of school children				3 e	4			
Provides psychiatric services for the courts			1, 3	3	4	2		
Makes special studies to determine incidence, cause, and/or treatment of mental disorders					7	7		
Renders additional service not covered in this classification		4	3, 5		4	2, 9	4	

See footnotes at end of table.

TABLE 2.—Department of State government responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory						
	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York North Carolina
Promulgates and/or enforces State laws, rules, and regulations	4, 6	4	4	5 <sup>c</sup>	4	5 <sup>c</sup>	3 2, 54, 6
Promotes local mental hygiene programs					4		3
Conducts educational programs:							
For the general public					1, 4		3
For physicians							
For nurses					1		3
For school teachers and/or teacher-training students					1		
Supervises and/or provides consultation service to local organizations							3 2
Furnishes financial aid to local mental hospitals					4		
Operates a direct service program:							
Operates mental hospitals	4	4	4	5	4	5	3 5 <sup>b</sup>
Maintains a follow-up service for paroled or discharged patients		4		5	4		3
Operates institutions for the feeble-minded	4	4		5	4	5	3 5
Maintains separate facilities for epileptics					4		3
Hospitalizes drug addicts and/or alcoholics	4	4	4	5	4 <sup>a</sup>		5
Licenses or approves private institutions for the insane or feeble-minded				2	4		3 2
Operates mental hygiene clinics—							
Mobile					4		3
Stationary		4		5	4		2
Child guidance				5			3
General		4		5	4		2
Diagnostic and treatment				5			3
Diagnostic only		4			4		2
In connection with out-patient departments of State mental hospitals		4		5	4		
Independent of State mental hospitals							2
Makes individual examinations upon request							
Provides follow-up service after clinic or individual examination				5	4		3 1
Makes psychometric or psychiatric examinations of school children				5			3
Provides psychiatric services for the courts				5			2
Makes special studies to determine incidence, cause, and/or treatment of mental disorders					4		3
Renders additional service not covered in this classification	6	4		5			5, 6

See footnotes at end of table.

TABLE 2.—Department of State government responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory						
	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina
Promulgates and/or enforces State laws, rules, and regulations	4, 6	2	4	4, 6	2	2	1, 5 *
Promotes local mental hygiene programs		2					5
Conducts educational programs:							
For the general public					2		5
For physicians					2		
For nurses							
For school teachers and/or teacher-training students				7	2		
Supervises and/or provides consultation service to local organizations		2		7	2	1, 2	5
Furnishes financial aid to local mental hospitals		2			2	8	
Operates a direct service program:							
Operates mental hospitals	4	2	4	4	2	2	5
Maintains a follow-up service for paroled or discharged patients		2	4	4	2	2	5
Operates institutions for the feeble-minded	4	2	4	4	2	2	5
Maintains separate facilities for epileptics		2			2		
Hospitalizes drug addicts and/or alcoholics	4			4	2	2	
Licenses or approves private institutions for the insane or feeble-minded		2			2	1	
Operates mental hygiene clinics—							
Mobile		2					5
Stationary		2	4	7	2	2	
Child guidance		2			2		5
General		2	4	7	2	2	5
Diagnostic and treatment		2			2	2	5
Diagnostic only			4	7			
In connection with out-patient departments of State mental hospitals		2	4		2	2	5
Independent of State mental hospitals		2		7			
Makes individual examinations upon request		9					
Provides follow-up service after clinic or individual examination					2	2	5
Makes psychometric or psychiatric examinations of school children							5
Provides psychiatric services for the courts		2		7	2	2	5
Makes special studies to determine incidence, cause, and/or treatment of mental disorders					2		
Renders additional service not covered in this classification	4		4	6			1
							4

See footnotes at end of table.



TABLE 2.—Department of State government responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin
Promulgates and/or enforces State laws, rules, and regulations.....	1, 4	4	5 *	2	2, 4	4, 6	1, 4	2, 7
Promotes local mental hygiene programs.....	1	1						
Conducts educational programs:								
For the general public.....		1			2			
For physicians.....						1		7
For nurses.....		1				1		
For school teachers and/or teacher-training students.....		1			2			
Supervises and/or provides consultation service to local organizations.....	1	1		2	2	1		2
Furnishes financial aid to local mental hospitals.....				3				2
Operates a direct service program:								
Operates mental hospitals.....	4	4	5	2	4	4	4	2
Maintains a follow-up service for paroled or discharged patients.....			5			4		2
Operates institutions for the feeble-minded.....	4	4	5	2	4	4	4	2
Maintains separate facilities for epileptics.....		4						
Hospitalizes drug addicts and/or alcoholics.....	4 *	4	5	2	4	4	4 *	2
Licenses or approves private institutions for the insane or feeble-minded.....				3			4	
Operates mental hygiene clinics—								
Mobile.....		1		2				
Stationary.....					4, 7 *			2, 7
Child guidance.....		1		2				7
General.....					2, 4, 7 *			2
Diagnostic and treatment.....				2	7 *			7
Diagnostic only.....		1			2, 4			2
In connection with out-patient departments of State mental hospitals.....					4			2
Independent of State mental hospitals.....		1		2	2, 7 *			7
Makes individual examinations upon request.....			5					7
Provides follow-up service after clinic or individual examination.....				2				
Makes psychometric or psychiatric examinations of school children.....								
Provides psychiatric services for the courts.....			5		2, 7 *			2
Makes special studies to determine incidence, cause, and/or treatment of mental disorders.....	1							7
Renders additional service not covered in this classification.....			5	2	4	4, 6	1	2

See footnotes at end of table.

TABLE 2.—Department of State government responsible for specific psychiatric services in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory				
	Wyoming	Alaska	Hawaii	Puerto Rico	Virgin Islands
Promulgates and/or enforces State laws, rules, and regulations.....	4		1, 4	1, 6	1
Promotes local mental hygiene programs.....			1		
Conducts educational programs:					
For the general public.....			1		
For physicians.....					
For nurses.....					
For school teachers and/or teacher-training students.....			1		
Supervises and/or provides consultation service to local organizations.....					
Furnishes financial aid to local mental hospitals.....			1		
Operates a direct service program:					
Operates mental hospitals.....	4		1*, 4	1	1
Maintains a follow-up service for paroled or discharged patients.....			1	1	
Operates institutions for the feeble-minded.....	4		4		
Maintains separate facilities for epileptics.....					
Hospitalizes drug addicts and/or alcoholics.....	4		1, 4		
Licenses or approves private institutions for the insane or feeble-minded.....			4		
Operates mental hygiene clinics—					
Mobile.....			1		
Stationary.....			1		
Child guidance.....			1		
General.....			1		
Diagnostic and treatment.....			1		
Diagnostic only.....					
In connection with out-patient departments of State mental hospitals.....					
Independent of State mental hospitals.....			1		
Makes individual examinations upon request.....					
Provides follow-up service after clinic or individual examination.....			1		
Makes psychometric or psychiatric examinations of school children.....					
Provides psychiatric services for the courts.....			1		
Makes special studies to determine incidence, cause, and/or treatment of mental disorders.....					
Renders additional service not covered in this classification.....			4		

## \*Code:

1. Health department
  2. Department of welfare, social security, or public assistance
  3. State board, department, or commission of mental hygiene
  4. State board of control, department of institutions, hospital board or commission, eleemosynary board, board of examiners, board of affairs, board of charities and correction
  5. Independent State hospital (separate board of trustees, directors, or managers responsible for each State mental institution)
  6. Board of eugenics control, board of sterilization, institutional board of health, State board of medical examiners
  7. State university or college
  8. State legislature
  9. Other departments of State government
- \* The department of health is really a bureau of public health subordinate to the department of health and welfare.
- \* Three separate agencies of this classification function in this capacity.
- \* Two separate agencies of this classification function in this capacity.
- \* Four separate agencies of this classification function in this capacity.
- \* Separate mental ward in a State general hospital; for acute cases only; in connection with a mental hygiene clinic.
- \* Separate ward or colony in a State mental hospital.
- \* Not routinely: Under certain conditions; occasionally; upon request.

The regulatory control exercised by State agencies which render any form of psychiatric service is associated largely with admission to or release from State mental hospitals. Although admission policies are extremely diverse in detail, they may be classified broadly as voluntary admissions, court commitments, and emergency commitments. About two-fifths of the States admit patients by all three

methods; approximately the same number honor voluntary admissions and court commitments; and in the remaining States only court-committed cases are accepted. States vary as to whether court commitments are based upon the findings of one physician, two physicians, or a special sanitary board or commission. These special commissions may be composed entirely of physicians, or their membership may include a lawyer, clerk of the court, county judge, or other nonmedical person. States also differ with respect to the weight attached to petitions and statements of friends and relatives in the course of commitment procedures. Where observation periods are provided for, the usual term of observation by the hospital staff is limited to 30 days.

Fiscal arrangements governing admission to State mental hospitals may be made on either a free, part-pay, or full-pay basis. Theoretically, the method followed in practically all States is that whereby the patient's family pays such portion of a fixed charge as it is able, and the deficit is made up from public funds. Indigent patients committed to State mental hospitals are accepted entirely free if their responsible relatives are also without funds to aid in their support. Some twenty-odd States require the county or town from which the patient was admitted to bear a definite part, or, occasionally, all of the expense which the patient cannot meet, regardless of whether he was admitted on a free or part-pay basis. In actual operation, fees from patients are collected in only 19 States. Even here income from taxes far exceeds income from fees, while the number of patients who pay anything for their care and maintenance is shown to be far in the minority. Although about 30 percent of the States report admission of private (full-pay) patients, the number of such persons hospitalized in State institutions is exceedingly small. No inquiry was made into the treatment methods employed by the various State mental hospitals. That some concentrate upon custodial rather than therapeutic services is known, but evaluation of performance does not fall within the scope of this study.

While in a few jurisdictions outright discharge of patients from State mental hospitals is practiced, the parole system of discharge is provided for by most States. According to the latter arrangement, a patient is dismissed conditionally upon the discretion of the hospital superintendent and/or medical staff. Length of the parole period ranges from 3 months to 2 years. About half of the States maintain a follow-up service for paroled or discharged patients. Such service is sometimes administered through the out-patient department of the hospital and sometimes through field workers employed for this purpose.

Facilities for the feeble-minded in most instances are set up as separate institutions rather than as wards within State mental hospitals.

Provisions for epileptics, on the other hand, are usually an integral part of either the mental hospital or the feeble-minded colony. About four-fifths of the States admit nonpsychotic drug addicts and alcoholics to State mental hospitals for treatment. At the same time, such admissions are often restricted to "care for a limited time," "persons having acute conditions," "persons who can pay," "voluntary patients," or—in some States—to "court-committed patients."

Twelve States, in addition to operating mental hospitals which serve the jurisdiction as a whole, make financial grants to certain local mental hospitals which accept free or part-pay patients. As a rule, the subsidy fund is administered by the same agency that operates the State institutions, but this is not always the case. For instance, in 3 States the grants are made directly by the State legislature to each local hospital, while in another the department of welfare controls the State mental hospital but a special board for the insane is charged with subsidization of local institutions. Licensure or approval of private institutions for the insane is a function of 6 departments of welfare, 5 boards of control or departments of institutions, 4 health departments, and 4 departments, boards, or commissions of mental hygiene. Such approval is sometimes based upon close supervision and in other instances it represents little more than routine registration.

In an effort to prevent propagation by mentally defective persons, over half of the States—under prescribed conditions—provide for eugenic sterilization of selected groups of feeble-minded or otherwise mentally defective persons. Responsibility for this phase of the control of mental disorders frequently rests directly with a special board of eugenics control, board of medical examiners, or board of institutional health rather than with the agency charged with the broader and more general phases of the problem.

Besides affording institutional care to the mentally ill and the mentally deficient, approximately half of the States were operating mental hygiene clinics during the year 1940. Such clinics offer facilities for early diagnosis and treatment of psychiatric disturbances which, if allowed to progress, frequently lead to necessity for hospitalization at a later date. In addition to the States which operated clinics, 5 other jurisdictions reported that individual psychiatric, psychological, psychometric, or neurological examinations were made upon request. Nineteen States furnished psychiatric services for the courts. Since this study is restricted to State service, facilities operated by local or voluntary agencies are not included in this count.

Most often, mental hygiene clinics are operated in connection with the out-patient departments of State mental hospitals. In some States, however, mental hygiene activities are entirely independent of the hospital program; in still others, both types of administration are spon-

sored. Clinics operated independently of the State mental hospitals are organized predominantly by welfare departments and State university hospitals, and less frequently by health departments. Health department participation in mental hygiene activities, as revealed by the information collected for this survey, was not so extensive as that described by Vogel<sup>3</sup> for the year following (1941). Expansion of programs is not wholly accountable for differences in the two bodies of data, however, for description of the more recent situation includes certain activities not covered in table 2 of this article.

Whereas the service rendered in a number of mental hygiene clinics is restricted to child guidance, in others the program is broader and extended to the general public. Usually, both diagnosis and treatment are offered, but in certain instances clinics are conducted solely for diagnostic purposes. Descriptive details of the clinics operated by each State are set forth in table 2. In this tabulation, likewise, the sponsoring agencies are identified. No provision is made for comparison of the number of clinics operated or of the volume of patients served in the respective States. Stationary clinics, for example, may represent a lone facility located on the institutional grounds or it may apply to a number of permanent centers situated at various points throughout a designated area. Mobile clinics may cover the services of either single or multiple itinerant staffs visiting less populous communities at stated intervals. For the most part, clinic service is available for selected areas only rather than for all sections of the State. Social workers are employed for complete follow-up of examined cases by about half of the jurisdictions which engage in mental hygiene activities.

Inasmuch as mental hygiene is a relatively new development, it is desirable that information be disseminated concerning the value of such a program. Recognizing this, about a dozen States have initiated educational programs for the purpose of acquainting the general public with the objectives of organized mental hygiene activities. Lectures to community groups, radio talks, press releases, and distribution of literature are the educational devices usually employed. Nearly the same number of States adapt special educational measures to the interests and needs of particular professional groups which are most apt to be confronted with incipient mental disorders. Physicians, nurses, school teachers, and students in teachers' training colleges constitute these selected groups, while lectures, demonstrations, postgraduate courses, and in-service training represent the methods utilized. Responsibility for the educational features of mental hygiene programs is centered primarily in the same agency which maintains clinic facilities; occasionally, however, a health de-

<sup>3</sup> Vogel, Victor H.: Administrative organization for mental hygiene. *Pub. Health Rep.*, 57: 537 (April 10, 1942).



partment engages in educational pursuits even when it has no part in actual clinic service.

Various types of research for the purpose of determining the incidence and causes of mental disorders, as well as the most effective methods of treatment and care, are included in the mental hygiene programs of 3 State health departments, 3 State universities, 2 departments of welfare, 1 department of mental hygiene, and 1 department of institutions.

## RECONNAISSANCE OF ANOPHELINE LARVAL HABITATS AND CHARACTERISTIC DESMIDS OF THE OKEFENOKEE SWAMP, GEORGIA<sup>1</sup>

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### INTRODUCTION

The absence of malaria in the Okefenokee Swamp, located in southeastern Georgia and northern Florida, may well have puzzled sanitarians. Here, surrounded by more or less malarious swamps, is a salubrious one 600 to 700 square miles in extent. Abounding in the Okefenokee is an anopheline mosquito of which an early visitor, Captain Rodenbough (cited in Wright and Bishop (1)) could claim a century ago that "mosquitoes sometime rise in such swarms that the trees are only seen dimly as through a dust storm." Surveys by malariologists (2, 3) confirmed the reported lack of malaria, established the presence of great numbers of anophelines, showed house infestation by anophelines to be the rule, and demonstrated another unusual circumstance, viz, that all anophelines breeding in the water of the swamp belonged to a single species, *Anopheles crucians* Wiedemann. The investigators did not find *A. punctipennis* (Say). They especially emphasized the nonoccurrence of *A. quadrimaculatus* Say, the principal malaria vector in the southeastern United States. Absence of *A. quadrimaculatus*, if a fact, is certainly anomalous and significant in so large a perennially wet region located near the geographical center of this common mosquito's range (cf. 4).

A possible explanation for the absence of *A. quadrimaculatus* and *A. punctipennis* in the Okefenokee is implicit in a recent ecological classification of anopheline breeding waters of the southeastern coastal plain based on the distribution of characteristic desmid indicator species (5). A "sphagnum type" pond, in which no anopheline other than *A. crucians* was observed to breed, was proposed and characterized from a study of a bog near Meinhard, Effingham County, Ga. The "sphagnum type" pond was at first considered of

<sup>1</sup> From the Division of Infectious Diseases, National Institute of Health.

little practical importance in the region because no other ponds were known to belong to the type. From a later cursory survey of Billys Lake and two adjacent waters of the Okefenokee area it was reasonable to surmise that the entire Okefenokee Swamp and many outlying basins would, upon study, require classing with this type and that there only *A. crucians* and little or no malaria might be expected.

Collections of mosquito larvae and algae were made at 26 typical stations during 1938-39 in the following regions of the Okefenokee: Billys Lake, Billys Island ponds, Billys Island Bay, Minnes Lake, Floyds Island Prairie, Big Water, "The Canal," and Chessers Prairie. Adult mosquitoes were collected from representative shelters—buildings and hollow trees—without attempt to take large numbers (which were checked for species) when available at houses and barns.

#### ANOPHELINE ADULTS

Collection data tend to support the findings of Mayne (2, 3). He reported, and the present work confirms, the following: (1) "The only anopheline present was *A. crucians*;" (2) "this species was seen biting in daylight, in sunshine, as well as in shade;" (3) "this species freely entered houses;" (4) "on Billys Island it far outnumbered all other species of mosquitoes;" (5) "invasion of tree stumps and hollow logs by *A. crucians* is very common;" (6) "no specimen of *quadrimaculatus* was encountered in the swamp area." Similarly, Russell (Mayne (2)) working in August and September on Billys Island reached conclusions similar to (1), (3), and (6) of Mayne's.

Very few male *A. crucians* were seen by Mayne and Russell in late summer. They reported sex ratios of 1 male to 127 females and 1 male to 130 females, respectively, for Billys Island. The relative paucity of males was much less marked a decade and a half later, probably because the human inhabitants and all except one of the buildings were gone. A sex ratio of 1:28 was determined, based on 264 specimens caught on the same island July 19-21, 1939. In February, when only 32 imagines could be found, the ratio had been 1:15, and in April, after emergence of a spring "brood," it had been 1:7. These data might be taken as substantiation of Mayne's contention that in the Okefenokee *A. crucians* probably produces "definite broods with little or no overlapping in generations." But, certainly, the extreme sex ratios calculated by Mayne and corroborated by Russell reflect collecting by both investigators from shelters more attractive to females than to males. Barber, Komp, and Hayne (6) showed that for anophelines in resting places "the more accessible the blood, the larger the percentage of females—and this factor seems to be more important in the case of *Anopheles crucians* than in the case of *Anopheles quadrimaculatus*."



## ANOPHELINE LARVAE

Unlike the earlier malaria surveys which dealt principally with the disease itself and with adult anophelines, this reconnaissance had to do particularly with the aquatic habitats of anophelines. Mayne, however, "covered 30 miles of navigable water throughout the swamp territory where only a few forms of *Anopheles* were encountered." The findings of July and August 1939 record breeding evidently equally scanty but more general since a few larvae were found in the "sphagnum mats" and on the "prairies canopied with water lilies," both reported negative by Mayne. In February and March, on the other hand, larvae of all stages and pupae were not uncommon wherever sought, excepting only in the open water. The similar proportion of fourth stage larvae and pupae to smaller larvae in both months refutes Mayne's prediction of "definite broods with little or no overlapping in generations."

Larvae were invariably *A. crucians*. A few collections have been re-examined to determine race. These larvae run satisfactorily to *A. crucians crucians* King (7); at least the palmate hairs on abdominal segments 3 and 7 of the larger ones are but slightly reduced. This is, of course, not good evidence that *A. crucians georgianus* King, indistinguishable as imago, does not also occur in the swamp area. As noted under aquatic habitats the isolated cypress ponds on the islands were classified as belonging to a type of anopheline breeding pond studied elsewhere in Georgia and found to be tolerated by *A. quadrimaculatus*, but here as everywhere else in the Okefenokee *A. crucians* only was found.

## AQUATIC HABITATS

Aquatic habitats of the Okefenokee have been differentiated by residents and biologists (8) as follows: (1) Shallow marshes or prairies; (2) open lakes and their borders; (3) wooded swamps or cypress bays; (4) cypress ponds; (5) runs; and others. These aquatic environments have come about largely from the original sea-bottom topography which determined depth of the water and its flow or stagnation. Without disparaging the validity and usefulness of these categories (which are correlated with the distribution of higher plants and aquatic vertebrates), it is, nevertheless, believed constructive to stress, so far as warranted, their essential sameness, chemical and microbiological. "The Okefenokee Swamp, except for its islands, open prairies, and watercourses, is just one immense sphagnum bog or morass" (8) (cf. 9). Desmids, considered indicative of ecological factors important to anopheline larvae, will be shown to vary relatively little from place to place in the swamp.

The inference is that this monotony of environment and micro-biotas results from chemically extreme conditions and that this same cause, or a result of it, excludes anophelines other than *A. crucians*. Such an extreme condition itself, or indicative of others, is the hydrogen-ion concentration, which ranged from pH 3.7 to 3.9 in all open waters whenever determined. Only the isolated cypress ponds of Billys Island and a well were less acid. The less acid range in reaction of four cypress ponds, pH 4.1–5.7, was correlated with paler water, considered by Welch (10) as probably due to a lower concentration of organic colloids responsible for the reaction. Otherwise, everywhere in the swamp the concentration of colloidal particles appeared to be constantly high. Afternoon Secchi disc readings from Billys Lake in winter and spring, which averaged 39.5 and 38 inches, respectively, are probably typical of all this unusually acid, dark water.

The concept, bog lake, is variously defined. The Okefenokee contains numerous connected "sphagnum bog lakes" as described by Welch (10), or highmoors with open waters (11), since it is characterized by sphagnum, ericaceous shrubs, high acidity, and low mineral content. However, its open waters differ from northern bog lakes described by Welch in at least two important respects: (1) The Okefenokee open waters, which are quite as acid as the waters lying over the marginal sphagnum mats, fluctuate in reaction but slightly; (2) Okefenokee waters are associated with current because of a difference in elevation (disregarding islands) of roughly 20 feet between the northeastern margins and the south central outlet.

Using the key to anopheline breeding waters in coastal Georgia and South Carolina (5), all Okefenokee aquatic habitats—lakes, prairies, runs, bays (excepting only cypress ponds)—classify easily as "desmid-rich class, sphagnum type." The cypress ponds are different and less invariable. Those surveyed belong to the "desmid-rich class" and the "desmid-optimum type." However, in their moderate acidity, by the presence of certain "sphagnum type" desmids and the absence of many typical "desmid-optimum type" desmids, and possibly by virtue of the nonoccurrence of anopheline larvae other than *A. crucians*, they simulate the "sphagnum type" pond.

"Sphagnum type" waters may be characterized by their floras more successfully perhaps than any other kind of anopheline breeding pond. Among the macrophytes sphagnums are dominant, especially in the ecological sense of their influence on the environment, an influence which may be even greater after death, as peat. In the peat of sphagnum bogs a "highly specific" bacterial flora thrives to great depths, according to Waksman and Stevens (12); this flora is characterized by the curious absence of nitrifying and aerobic cellulose decomposing species.

## CHARACTERISTIC DESMIDS

The preliminary list of common desmids of the Okefenokee (table 1) includes only well-marked species identified with a reasonable degree of certainty. A larger number of undetermined forms, many of them peculiar, especially closteria, staurastrum, cosmaria, and euastrum, await further study. The 34 named forms might be expected to be comprehended in the earlier catalog of desmids (89 forms) of anopheline breeding ponds (5). This is not the case. Only eighteen (53 percent) are common to both lists. Moreover Brown's (13) records of 225 desmids from the entire southeastern coastal plain (which did not include collections from the Okefenokee) list only 18 of these 34 desmids. In table 1 the frequency of each desmid is shown (percentage obtained by dividing the number of collections containing the species by the total number of collections).

TABLE 1.—Common desmids and their frequencies in the Okefenokee Swamp, Ga., 1938-39

Species	Percent	Species	Percent
I. <i>Arthrodesmus</i> :		XI. <i>Penium</i> :	
1. <i>incus</i> var. <i>extensus</i> Anders.....	5	1. <i>cucurbitinum</i> Biss. forma.....	5
2. <i>otocornis</i> Ehr.....	5	2. <i>phymatosporum</i> Nordst.....	10
3. <i>phimus</i> Turn. (?).....	5	3. <i>spirostriolatum</i> Bark.....	35
II. <i>Closterium</i> :		XII. <i>Phymatodocis</i> :	
1. <i>costatum</i> Corda.....	5	1. <i>Nordstedtiana</i> var. <i>minor</i>	
III. <i>Desmidiium</i> :		Börg.....	35
1. <i>Baileyi</i> (Ralfs) Nordst.....	5	XIII. <i>Sprotaenia</i> :	
2. <i>quadratum</i> Nordst.....	75	1. <i>condensata</i> Bréb.....	10
IV. <i>Docidium</i> :		XIV. <i>Staurastrum</i> :	
1. <i>undulatum</i> Bail.....	15	1. <i>furcigerum</i> Bréb. (?).....	15
V. <i>Euastrum</i> :		2. <i>furcigerum</i> var. <i>armigerum</i>	
1. <i>elegans</i> (Bréb.) Kütz.....	5	(Bréb.) forma <i>gracillimum</i>	
2. <i>insigne</i> Hass.....	5	G. M. Smith.....	10
3. <i>pinnatum</i> Ralfs.....	10	3. <i>gladionum</i> Turn.....	5
VI. <i>Gymnozyga</i> :		4. <i>inconspicuum</i> Nordst. forma	
1. <i>moniliformis</i> Ehr.....	90	ma.....	15
VII. <i>Hyalotheca</i> :		5. <i>quadrispinatum</i> Turn.....	60
1. <i>dissiliens</i> (Smith) Bréb.....	10	XV. <i>Tetmemorus</i> :	
VIII. <i>Micrasterias</i> :		1. <i>brebionii</i> (Menegh.) Ralfs	
1. <i>conferta</i> Lund.....	5	var. <i>minor</i> DeBary.....	55
2. <i>radiosa</i> Ralfs.....	15	2. <i>laevis</i> (Kütz.) Ralfs.....	10
3. <i>truncata</i> (Corda) Bréb.....	50	XVI. <i>Triploceras</i> :	
IX. <i>Netrium</i> :		1. <i>verticillatum</i> Bail.....	5
1. <i>digitus</i> (Ehr.) Itz. & Roth.....	40	XVII. <i>Xanthidium</i> :	
2. <i>oblongum</i> (DeBary) Lütke.....	5	1. <i>antilopaeum</i> (Bréb.) Kütz.	
X. <i>Onychonema</i> :		forma (?).....	35
1. <i>laeve</i> var. <i>latum</i> W. & G. S.		2. <i>antilopaeum</i> var. <i>minne-</i>	
West.....	5	<i>poliensae</i> Wolle.....	30
		3. <i>cristatum</i> Bréb.....	25

It was evident to the writer, who has examined desmid samples from 400 or more ponds in the region, that this was a most unusual assemblage of species. To illustrate this uniqueness and to measure the degree of indicator value for the more frequent Okefenokee species, a comparison was made with 134 desmid samples (all available) from Burke, Crisp, Dougherty, Jenkins, Pulaski, and Toombs counties in Georgia kindly furnished by Dr. Justin Andrews of the Georgia State Board of Health. The samples had been collected in the same manner as the Okefenokee samples by malariologists surveying anopheline

habitats and are considered representative of the general region. In the 134 lists of species the following 10 desmids were most frequent:

	Percent
1. <i>Xanthidium cristatum</i> .....	26
2. <i>Hyalotheca dissiliens</i> .....	24
3. <i>Micrasterias truncata</i> .....	22
4. <i>Cosmarium pseudoconnatum</i> Nordst.....	22
5. <i>Closterium setaceum</i> Ehr.....	20
6. <i>Desmidium Aptogonum</i> Bréb.....	18
7. <i>Euastrum evolutum</i> var. <i>integrus</i> W. & G. S. West.....	15
8. <i>Closterium costatum</i> .....	12
9. <i>Netrium digitus</i> .....	12
10. <i>Gymnozyga moniliformis</i> .....	10

The species 4, 5, 6, and 7, most frequent in the general region, did not occur in the Okefenokee collections. The frequencies in the general region of the most common Okefenokee desmids are as follows, the Okefenokee frequency being given first for comparison:

Species of desmid	Frequency (percent)	
	Okefenokee	General region
1. <i>Gymnozyga moniliformis</i> .....	90	10
2. <i>Desmidium quadratum</i> .....	75	--
3. <i>Staurastrum quadrispinatum</i> .....	60	1
4. <i>Tetmemorus Brebissonii</i> var. <i>minor</i> .....	55	6
5. <i>Micrasterias truncata</i> .....	50	22
6. <i>Netrium digitus</i> .....	40	12
7. <i>Penium spirostriolatum</i> .....	35	1
8. <i>Phymatodocis Nordstedtiana</i> var. <i>minor</i> .....	35	1
9. <i>Xanthidium antilopaeum</i> forma.....	35	--
10. <i>Xanthidium antilopaeum</i> var. <i>minneapoliense</i> .....	30	1
11. <i>Xanthidium cristatum</i> .....	25	26

It appears certain that *Gymnozyga moniliformis*, *Micrasterias truncata*, *Xanthidium cristatum*, and *Netrium digitus* are environmentally tolerant species of low value as indicators. Apparently highly characteristic of the Okefenokee swamp are *Desmidium quadratum*, *Phymatodocis Nordstedtiana* var. *minor*, *Staurastrum quadrispinatum*, *Xanthidium antilopaeum* var. *minneapoliense*, *Xanthidium antilopaeum* forma, and *Penium spirostriolatum*.

The "sphagnum type" anopheline pond, where *A. crucians* was found breeding constantly alone, was proposed (5) after a survey of Bethesda Pond, a sphagnum bay about 20 miles from Savannah, Ga. This area has, like the Okefenokee, clear brown water associated with perceptible current, a reaction almost invariably more acid than pH 4.0, and relatively extensive occupation by sphagnum. The whole basin, less than a few square miles in extent, is, obviously, inconsequential by comparison with the Okefenokee, second largest swamp in the United States. The identified desmids of Bethesda, only 14

species, follow in order of frequency for the eight collections made in April 1938, and May and June 1939:

	Percent
1. <i>Hyalotheca dissiliens</i> -----	62
2. <i>Staurastrum quadrispinatum</i> -----	62
3. <i>Staurastrum inconspicuum</i> -----	37
4. <i>Tetmemorus Brebissonii</i> var. <i>minor</i> -----	37
5. <i>Gymnozyga moniliformis</i> -----	25
6. <i>Spondylosium planum</i> (Wolle) W. & G. S. West-----	25
7. <i>Desmidium quadratum</i> -----	25
8. <i>Penium spirostriolatum</i> -----	25
9. <i>Euastrum obesum</i> Josh-----	25
10. <i>Micrasterias truncata</i> -----	12
11. <i>Micrasterias conferta</i> -----	12
12. <i>Penium cucurbitinum</i> -----	12
13. <i>Xanthidium antilopaeum</i> forma-----	12
14. <i>Euastrum humerosum</i> Ralfs-----	12

Four of the five desmids cited as highly characteristic of the Okefenokee reappear in Bethesda collections and are therefore considered indicators of the "sphagnum type" anopheline pond. The species are: *Desmidium quadratum*, *Staurastrum quadrispinatum*, *Xanthidium antilopaeum* forma, and *Penium spirostriolatum*. Moreover, 11 (78 percent) of the Bethesda desmids are species common to the Okefenokee. In fact, 50 percent of the Bethesda list comprise simply 7 of the 11 most frequent Okefenokee species. Why the common and ubiquitous *Netrium digitus* and *Xanthidium cristatum* were not found at Bethesda is a mystery; their absence, at any rate, like their presence, is not significant.

Some limnologists (cited by Welch (10)) have considered bog lake plankton a "selection biota" characterized chiefly by the absence of many common but inadequately tolerant plankters rather than by the presence of a certain few species. This hypothesis seems inapplicable to the desmids of southeastern bogs (bays) where, as the above data show, characteristic species are prominent. However, the proposal is valuable and it is informative to check the absence or scarcity in bog ponds of many desmids which are the most common and frequent species elsewhere in the region. Such negative findings aid materially in classifying ponds of the "desmid-rich class" to proper types.

Quantitative study of Okefenokee desmids, it is believed, would emphasize the peculiarity of the swamp flora indicated by this preliminary qualitative study. In default of counts, some notion of relative abundance for a few principal species of algae is afforded by notes on the numerically dominant organisms. In twelve collections a single organism predominated. The dominance of the various organisms was as follows:

The diatoms— <i>Eunotia tridentula</i> Ehr., <i>Frustulia rhomboides</i> (Ehr.) DeToni, and <i>Asterionella notata</i> Grun. ....	once each
A bluegreen— <i>Hapalosiphon pumilus</i> (Kütz.) Hansg.? .....	twice
An unidentified filamentous green alga .....	once
Desmids— <i>Phymatodocis Nordstedtiana</i> var. <i>minor</i> and <i>Gymnozyga moniliformis</i> .....	once each
<i>Desmidium quadratum</i> .....	four times

*D. quadratum*, it may be noted, besides having occurred in Georgia, in Okefenokee and Bethesda samples only, evidently attains maximum abundance in "sphagnum type" ponds.

#### DISCUSSION

Several sanitarians have recognized a proclivity manifested by some races of *Anopheles crucians* to breed in highly acid waters. Metz (14) reported large numbers of *A. crucians* larvae breeding in the absence of other anophelines in a swamp rendered very acid by sulfuric acid waste (148 p. p. m. sulfate). He looked in vain for the species in ponds several miles around where *A. quadrimaculatus* and *A. punctipennis* were found. Metz concluded that "the waters of the swamp possessed some peculiarity favorable to *crucians* but repellant to the other two species." Similarly, Chandler (15) discovered larvae of *A. crucians* breeding alone in the acid waters of a southern Illinois coal strip mine pond about 200 miles from the nearest known locality in the species' range. Although he surveyed the region for 3 years, Chandler did not find *A. crucians* in other ponds. In coastal Georgia, in the writer's experience, *A. crucians* is the chief anopheline in ponds (acid) of the "desmid-rich class," as *A. quadrimaculatus* is in ponds (slightly acid, neutral, alkaline) of the "desmid-poor class." The two species occur in conformity with this generalization even in summer when *A. quadrimaculatus* breeding is usually highest and *A. crucians* larvae are relatively scarce. It is not surprising, therefore, that *A. crucians* only, among south Atlantic coastal *Anopheles*, should tolerate, even thrive in, "sphagnum type, desmid-rich" bays such as Bethesda Pond and the Okefenokee Swamp.

#### SUMMARY

A reconnaissance of anophelines and the larval habitats in the Okefenokee Swamp in Georgia during 1938-39 corroborates and augments essential findings of previous malaria surveys, showing that *Anopheles crucians* Wied. is the only anopheline breeding in the waters of the swamp; the species far outnumbers all other mosquitoes at all seasons; the larvae and pupae are generally distributed, except on open waters; there are not definite broods; *A. crucians crucians* King is probably the chief, if not the sole, race present; *A. quadrimaculatus* Say does not occur in the swamp.



The aquatic environment was surveyed with reference to types of anopheline breeding ponds (5) as indicated by characteristic desmids. Data indicate:

The various aquatic habitats, almost all extensively occupied by sphagnum moss, differ little; and much the same microbiota is found all over the swamp, excepting, so far as is known, only a well and certain isolated island ponds.

The Okefenokee differs from described northern bogs in (a) more acid reaction of the open waters which fluctuates less (pH 3.7-3.9), (b) drainage by large perceptibly flowing "runs."

The aquatic habitats are classified "desmid-rich class, sphagnum type" anopheline ponds, except isolated island cypress ponds, which are "desmid-rich class, desmid-optimum type."

A preliminary list of desmids of the swamp includes peculiar species uncommon in the general region, of which *Desmidium quadratum* Nordst., *Staurastrum quadrispinatum* Turn., *Xanthidium antilopaeum* var. *minneapolisense* Wolle, *X. antilopaeum* forma, and *Penium spirostriolatum* Bark. are common forms characteristic of the swamp. These, except for *X. antilopaeum* var. *minneapolisense*, are proposed as indicators of the "sphagnum type" anopheline pond in which only *Anopheles crucians* was found to breed.

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## REPORT ON MARKET-MILK SUPPLIES OF STANDARD MILK ORDINANCE COMMUNITIES <sup>1</sup>

**Compliance of the Market-Milk Supplies of Certain Standard Milk Ordinance Communities With the Grade A Pasteurized and Grade A Raw Milk Requirements of the Public Health Service Milk Ordinance and Code, as Shown by Compliance (Not Safety) Ratings of 90 percent or More Reported by the State Milk-Sanitation Authorities During the Period July 1, 1940, to June 30, 1942**

The accompanying list gives the semiannual revision of the list of certain Standard Milk Ordinance communities in which the pasteurized market milk is both produced and pasteurized in accordance with the Grade A pasteurized milk requirements of the Public Health Service Milk Ordinance and Code and in which the raw market milk sold to the final consumer is produced in accordance with the Grade A raw milk requirements of said ordinance and code, as shown by ratings of 90 percent or more reported by State milk-sanitation authorities.

These ratings are not a complete measure of safety, but represent the degree of compliance with the Grade A requirements of the Public Health Service Milk Ordinance and Code. Safety estimates should also take into account the percentage of milk pasteurized, which is given in the following tables.

The milk ordinance recommended by the Public Health Service is now in effect in hundreds of communities ranging in population from 1,000 to 3,500,000 and located in 35 States.

The primary reason for publishing the rating lists from time to time is to encourage these communities to attain and maintain a high level of excellence in the enforcement of this ordinance. No comparison with communities operating under other milk ordinances is intended or implied.

It is emphasized that the Public Health Service does not intend to imply that only those communities on the list are provided with high-grade milk supplies. Some communities which have high-grade milk supplies are not included because arrangements have not been made for the determination of their ratings by the State milk-sanitation authority. In other cases the ratings which have been determined are now more than 2 years old and have therefore lapsed. In still other communities with high-grade milk supplies there seems, in the opinion of the community, to be no local necessity nor desire for rating or inclusion in the list, nor any reasonable local benefit to be derived therefrom.

The rules under which a community is included in this list are as follows:

(1) All ratings must have been determined by the State milk-sanitation authority in accordance with the Public Health Service

<sup>1</sup> From the States Relations Division.

rating method (Pub. Health Rep., 53: 1386 (1938). Reprint No. 1970), based upon the Grade A pasteurized-milk and the Grade A raw-milk requirements of the Public Health Service Milk Ordinance and Code.

(2) No community will be included in the list unless both its pasteurized-milk and its raw-milk ratings are 90 percent or more. Communities in which only raw milk is sold will be included if the raw-milk ratings are 90 percent or more. Communities which receive, without local inspection, milk from other sheds will be included in the list only if the locally inspected supply, as well as the shipped-in supply, shows a rating of 90 percent or more.

(3) The rating used will be the latest rating submitted to the Public Health Service, but no rating will be used which is more than 2 years old. In order to promote continuous rigid enforcement rather than occasional "clean-up campaigns" it is suggested that when the rating of a community on the list falls below 90 percent no resurvey be made for at least 6 months, resulting in removal from the next semiannual list.

(4) The Public Health Service will make occasional check surveys of cities for which ratings of 90 percent or more have been reported by the State. If such check rating is less than 90 percent but not less than 85, the city will be removed from the 90-percent list after 6 months unless a resurvey submitted by the State during this probationary interim shows a rating of 90 percent or more. If, however, such check rating is less than 85 percent, the city will be removed from the list immediately. If the check rating is 90 percent or more, the city will be retained on the list for a period of 2 years from the date of the check survey unless a subsequent rating submitted during this period warrants its removal.

Communities are urgently advised to bring their ordinances up to date at least every 5 years, since ratings will be made on the basis of later editions if those adopted locally are more than 5 years old.

Communities which are not now on the list and desire to be rated should request the State milk-sanitation authority to determine their ratings and, if necessary, should improve their status sufficiently to merit inclusion in the list.

Communities which are now on the list should not permit their ratings to lapse, as ratings more than 2 years old cannot be used.

State milk-sanitation authorities who are not now equipped to determine municipal ratings are urged, in fairness to their communities, to equip themselves as soon as possible. The personnel required is small, as in most States one milk specialist is sufficient for the work.

TABLE 1.—*Standard Milk Ordinance communities in which all market milk is pasteurized. In these communities market milk complies with the Grade A pasteurized milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by pasteurized milk ratings of 90 percent or more*<sup>1</sup>

Community	Percent- age of milk pasteur- ized	Date of rating	Community	Percent- age of milk pasteur- ized	Date of rating
ILLINOIS			KENTUCKY		
Brooklyn <sup>2</sup> .....	100	Oct. 8, 1941.	Louisville.....	100	Jan. 31, 1942.
Cahokia <sup>2</sup> .....	100	Do.	MINNESOTA		
Canteen <sup>2</sup> .....	100	Do.	Rochester.....	100	May 29, 1941.
Centerville <sup>2</sup> .....	100	Do.	Winona.....	100	September 1940.
Champaign.....	100	July 23, 1941.	MISSOURI		
East St. Louis <sup>2</sup> .....	100	Oct. 8, 1941.	Ladue.....	100	January 1942.
Fairmont City <sup>2</sup> .....	100	Do.	Richmond Heights.....	100	Do.
National City <sup>2</sup> .....	100	Do.	St. Louis.....	100	June 9, 1942.
Stites <sup>2</sup> .....	100	Do.	Webster Groves.....	100	January 1942.
Washington Park <sup>2</sup> .....	100	Do.	NORTH CAROLINA		
Waukegan.....	100	Apr. 29, 1942.	Greenville.....	100	Apr. 10, 1942.
IOWA					
Paulina.....	100	Jan. 5, 1942.			

<sup>1</sup> Note particularly the percentages of milk pasteurized in the various communities listed in these tables. This percentage is an important factor to consider in estimating the safety of a city's milk supply.

<sup>2</sup> Part of East Side Health District.

The inclusion of a community in this list means that the pasteurized milk sold in the community, if any, is of such a degree of excellence that the weighted average of the percentages of compliance with the various items of sanitation required for Grade A pasteurized milk is 90 percent or more and that, similarly, the raw milk sold in the community, if any, so nearly meets the requirements that the weighted average of the percentages of compliance with the various items of sanitation required for Grade A raw milk is 90 percent or more. However, high-grade pasteurized milk is safer than high-grade raw milk, because of the added protection of pasteurization. To secure this added protection, those who are dependent on raw milk can pasteurize the milk at home in the following simple manner: Heat the milk over a hot flame to 165° F., stirring constantly; then immediately place the vessel in cold water and continue stirring until cool.

TABLE 2.—Standard Milk Ordinance communities in which some market milk is pasteurized. In these communities the pasteurized-market milk complies with the Grade A pasteurized-milk requirements and the raw market milk complies with the Grade A raw-milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by pasteurized- and raw-milk ratings, respectively, of 90 percent or more <sup>1</sup>

[NOTE.—All milk should be pasteurized or boiled, either commercially or at home, before it is consumed. See text for home method]

Community	Percentage of milk pasteurized	Date of rating	Community	Percentage of milk pasteurized	Date of rating
<b>ALABAMA</b>			<b>LOUISIANA</b>		
Dothan .....	89	Apr. 16, 1942.	Alexandria .....	81	Apr. 24, 1942.
Montgomery .....	45	Nov. 28, 1941.	Monroe .....	41	Mar. 7, 1941.
Tuscaloosa .....	91	June 17, 1942.	Pineville .....	81	Apr. 24, 1942.
			Shreveport .....	83	Mar. 14, 1942.
<b>ARKANSAS</b>			<b>MICHIGAN</b>		
El Dorado .....	45	September 1941.	Crystal Falls .....	41	July 24, 1940.
Fayetteville .....	60	November 1940.	Iron River .....	51	Do.
Fort Smith .....	48	September 1940.	Stambaugh .....	51	Do.
Jonesboro .....	59	October 1940.			
Little Rock .....	56	October 1941.	<b>MINNESOTA</b>		
Pine Bluff .....	43	November 1941.	Moorhead .....	88	Feb. 14, 1941.
Texasarkana .....	62	September 1941.			
<b>COLORADO</b>			<b>MISSOURI</b>		
Pueblo .....	59	April 1941.	Brentwood .....	98	January 1942.
<b>FLORIDA</b>			Clayton .....	99.8	Do.
Coral Gables .....	98	May 20, 1942.	Ferguson .....	79	Do.
Dania .....	95	May 1, 1942.	Glendale .....	99.3	Do.
Deerfield .....	95	Do.	Kirkwood .....	89	Do.
Fort Lauderdale .....	95	Do.	Maplewood .....	91	Do.
Hallandale .....	95	Do.	Overland .....	92	Do.
Hollywood .....	95	Do.	Rockhill .....	88	Do.
Homestead <sup>2</sup> .....	94	May 25, 1942.	University City .....	99.5	Do.
Jacksonville .....	78	April 1941.			
Marianna .....	96	February 12, 1942.	<b>NEW MEXICO</b>		
Miami .....	98	May 20, 1942.	Albuquerque .....	77	Dec. 20, 1941.
Oakland Park .....	95	May 1, 1942.	Clovis .....	63	Mar. 18, 1942.
Pompano .....	95	Do.	Las Cruces .....	54	Feb. 2, 1942.
Tallahassee .....	50	September 1941.	Las Vegas .....	65	July 18, 1941.
			Taos .....	42	Mar. 6, 1942.
<b>ILLINOIS</b>			<b>NORTH CAROLINA</b>		
Chicago .....	99.8	Apr. 11, 1941.	Asheboro .....	63	Nov. 6, 1941.
Decatur .....	92	Oct. 3, 1940.	Asheville .....	76	May 1942.
Glencoe .....	99.6	Apr. 17, 1942.	Bethel .....	17	Apr. 10, 1942.
Highland Park .....	99.6	Do.	Biltmore Forrest .....	70	May, 1942
Kenilworth .....	99.6	Do.	Black Mountain .....	70	Do.
Lake Bluff .....	99.6	Do.	Concord .....	57	June 27, 1942.
Lake Forest .....	99.6	Do.	Durham .....	91	October 1940.
Oak Park .....	99.8	Jan. 17, 1941.	Enka .....	70	May 1942.
Winnetka .....	99.6	Apr. 17, 1942.	Farmville .....	5	April 10, 1942.
<b>IOWA</b>			Fayetteville .....	73	May 7, 1942.
Humboldt .....	87	Jan. 12, 1942.	Greensboro .....	86	August 1940.
Mt. Vernon .....	48	Feb. 2, 1942.	Hendersonville .....	61	May 30, 1942.
Sheldon .....	61	May 18, 1942.	High Point .....	94	July 17, 1941.
Washington .....	74	Jan. 7, 1941.	Hope Mills .....	73	May 7, 1942.
Webster City .....	55	May 13, 1942.	Kannapolis .....	57	June 27, 1942.
<b>KANSAS</b>			Kinston .....	12	July 9, 1940.
Lawrence .....	84	May 29, 1942.	Mars Hill .....	15	Jan. 10, 1941.
Pratt .....	61	November 1941.	Mt. Pleasant .....	57	June 27, 1942.
Wichita .....	72	December 1941.	Roxboro .....	32	Jan. 16, 1942.
<b>KENTUCKY</b>			Swannanoa .....	70	May 1942.
Bowling Green .....	68	June 12, 1941.	Weaverville .....	70	Do.
Glasgow .....	52	June 1941.			
Hazard .....	40	December 1941.	<b>NORTH DAKOTA</b>		
Lexington .....	71	Mar. 14, 1942.	Fargo .....	91	Feb. 16, 1941.
Owensboro .....	80	July 23, 1941.	Valley City .....	33	July 24, 1941.
Somerset .....	9	November 1940.			
			<b>OHIO</b>		
			Athens .....	80	July 6, 1940.

<sup>1</sup> Note particularly the percentage of milk pasteurized in the various communities listed in these tables. This percentage is an important factor to consider in estimating the safety of a city's milk supply.

<sup>2</sup> Has not adopted the milk ordinance recommended by the Public Health Service.

TABLE 2.—Standard Milk Ordinance communities in which some market milk is pasteurized. In these communities the pasteurized-market milk complies with the Grade A pasteurized-milk requirements and the raw market milk complies with the Grade A raw-milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by pasteurized- and raw-milk ratings, respectively, of 90 percent or more—Continued

[NOTE.—All milk should be pasteurized or boiled, either commercially or at home, before it is consumed. See text for home method]

Community	Percentage of milk pasteurized	Date of rating	Community	Percentage of milk pasteurized	Date of rating
OKLAHOMA			TEXAS—continued		
Ada.....	74	Feb. 3, 1942.	San Antonio.....	89	Mar. 14, 1942.
Bartlesville.....	63	Jan. 21, 1942.	Seguin.....	18	Sept. 10, 1941.
Blackwell.....	38	Nov. 15, 1941.	Sherman.....	53	Mar. 25, 1941.
Muskogee.....	88	May 17, 1942.	Texarkana.....	45	Feb. 4, 1941.
Okmulgee.....	64	Apr. 8, 1942.	UTAH		
Shawnee.....	48	Mar. 26, 1942.	Ogden.....	93	Sept. 15, 1941.
Tulsa.....	83	May 20, 1942.	Salt Lake City.....	96	Dec. 24, 1940.
Wewoka.....	52	July 8, 1940.	VIRGINIA		
OREGON			Abingdon.....	38	Mar. 21, 1941.
Astoria.....	78	June 20, 1941.	Bristol.....	80	December 1941.
Eugene.....	60	Nov. 1, 1940.	Pulaski.....	99	Dec. 18, 1941.
Portland.....	82	June 16, 1942.	South Boston.....	75	May 29, 1941.
Seaside.....	68	June 20, 1941.	Waynesboro.....	98	Nov. 15, 1941.
TENNESSEE			Williamsburg.....	55	May 26, 1941.
Bristol.....	80	December 1941.	WASHINGTON		
Memphis.....	90	December 1940.	Camas.....	6	June 18, 1941.
TEXAS			Pullman.....	87	Aug. 26, 1941.
Amarillo.....	78	Aug. 12, 1940.	Vancouver.....	28	Nov. 28, 1940.
Brownwood.....	64	May 31, 1941.	Walla Walla.....	61	May 28, 1941.
Bryan.....	14	July 20, 1940.	Yakima.....	72	May 14, 1941.
Canyon.....	42	Aug. 9, 1940.	WYOMING		
Fort Worth.....	93	June 5, 1942.	Casper.....	67	Oct. 10, 1941.
Gainesville.....	65	Mar. 31, 1942.	Cheyenne.....	75	Dec. 24, 1941.
Lamesa.....	47	Mar. 26, 1941.			
Lubbock.....	80	Nov. 21, 1941.			
Lufkin.....	43	Aug. 1, 1940.			

TABLE 3.—Standard Milk Ordinance communities in which no market milk is pasteurized, but in which the raw market milk complies with the Grade A raw milk requirements of the Public Health Service Milk Ordinance and Code to the extent shown by raw milk ratings of 90 percent or more<sup>1</sup>

[NOTE.—All milk should be pasteurized or boiled, either commercially or at home, before it is consumed. See text for home method]

Community	Date of rating	Community	Date of rating
ALABAMA		NORTH CAROLINA	
Albertville.....	May 1, 1942.	Bladenboro.....	June 4, 1942.
Atmore.....	Apr. 3, 1942.	Clarkton.....	Do.
Boaz.....	May 1, 1942.	Elizabethtown.....	Do.
Brewton.....	Apr. 19, 1942.	Hemp.....	Apr. 30, 1942.
Bridgeport.....	May 27, 1941.	Jackson.....	July 16, 1940.
Fort Payne.....	Mar. 25, 1942.	Murfreesboro.....	July 17, 1940.
Guntersville.....	May 1, 1942.	Rich Square.....	July 16, 1940.
Scottsboro.....	May 27, 1941.	Scotland Neck.....	Do.
Stevenson.....	Do.	Weldon.....	Do.
KANSAS		Winton.....	July 17, 1940.
Horton.....	Mar. 30, 1942.	VIRGINIA	
KENTUCKY		Blackstone.....	May 29, 1941.
Owenton.....	November 1941.	Boydton.....	Apr. 4, 1941.
LOUISIANA		Lawrenceville.....	Oct. 23, 1941.
Haynesville.....	Mar. 10, 1942.	WEST VIRGINIA	
		Grantsville.....	May 12, 1941.

<sup>1</sup> Note particularly the percentage of milk pasteurized in the various communities listed in these tables. This percentage is an important factor to consider in estimating the safety of a city's milk supply.

**DEATHS DURING WEEK ENDED AUGUST 1, 1942**

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Aug 1, 1942	Correspond- ing week 1941
Data from 87 large cities of the United States:		
Total deaths.....	7,368	8,460
Average for 3 prior years.....	8,047	
Total deaths, first 30 weeks of year.....	254,751	258,612
Deaths per 1,000 population, first 30 weeks of year, annual rate.....	12.0	12.1
Deaths under 1 year of age.....	592	583
Average for 3 prior years.....	517	
Deaths under 1 year of age, first 30 weeks of year.....	16,767	15,640
Data from industrial insurance companies:		
Policies in force.....	64,944,819	64,399,236
Number of death claims.....	10,672	10,739
Death claims per 1,000 policies in force, annual rate.....	8.6	8.7
Death claims per 1,000 policies, first 30 weeks of year, annual rate.....	9.5	9.9

# PREVALENCE OF DISEASE

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*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

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## UNITED STATES

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### REPORTS FROM STATES FOR WEEK ENDED AUGUST 8, 1942

#### Summary

The incidence of poliomyelitis declined during the week. A total of 128 cases was reported for the country as a whole, as compared with 145 cases for the preceding week and a 5-year (1937-41) median of 278 cases. The current incidence is below that for any prior year since 1938, when only 66 cases were reported for the corresponding week. Last year a total of 420 cases was reported for the same week. Only 2 States, Illinois, 22 (12 last week), and Tennessee, 19 (15 last week), reported more than 10 cases. The largest numbers of cases were reported in the geographic areas in which these 2 States are located.

A total of 64 cases of meningococcus meningitis was reported during the current week, as compared with 54 cases for the preceding week. The highest incidence is in the Middle Atlantic States, New York reporting 16 cases. Only 2 other States, Massachusetts (8) and California (6) reported more than 4 cases for the week. To date this year, 2,306 cases have been reported, a larger number than for the corresponding period of any other year since 1937, when 4,057 cases were reported for the same period.

Of the 9 common communicable diseases included in the following table, and for which weekly figures are available for earlier years, only meningococcus meningitis and influenza are above the 5-year median expectancy. The incidence of influenza, however, is low. Only 2 cases of smallpox were reported for the current week, both in Missouri. The number of cases of typhoid fever decreased from 246 to 233, of which 150 cases occurred in the South Atlantic and South Central States.



A total of 41 cases of Rocky Mountain spotted fever was reported, the largest number for any week this year. Maryland reported 12 cases, Tennessee 5, and North Carolina 4. Only 2 cases occurred in the northwest Mountain States.

Other reports for the week include 1 case of anthrax (in Georgia), 26 cases of amebic dysentery (12 in Texas), 259 cases of bacillary dysentery (150 in Texas), 410 cases of unspecified dysentery (351 in Virginia), 22 cases of tularemia, and 115 cases of endemic typhus fever (41 in Texas, 34 in Georgia, 13 in South Carolina, and 12 in Florida).

The death rate (annual basis) for the current week for 88 large cities in the United States is 10.2 per 1,000 population, as compared with 10.4 for the preceding week. The 3-year (1939-41) average for the week is also 10.2. The accumulated rate to date this year is 11.9, as compared with 12.1 for the corresponding period last year.

*Telegraphic morbidity reports from the State health officers for the week ended August 8, 1942, and comparison with corresponding week of 1941 and 5-year median*

In these tables a zero indicates a definite report, while leaders imply that, although none were reported cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Med-ian 1937-41	Week ended—		Med-ian 1937-41	Week ended—		Med-ian 1937-41	Week ended—		Med-ian 1937-41
	Aug. 8, 1942	Aug. 9, 1941		Aug. 8, 1942	Aug. 9, 1941		Aug. 8, 1942	Aug. 9, 1941		Aug. 8, 1942	Aug. 9, 1941	
NEW ENG.												
Maine.....	0	0	0				27	12	16	2	0	0
New Hampshire.....	0	0	0				10	2	2	0	0	0
Vermont.....	0	0	0				32	14	13	0	0	0
Massachusetts.....	5	1	2				91	83	83	8	0	0
Rhode Island.....	1	1	0				11	2	4	0	0	0
Connecticut.....	0	1	1	2			18	34	18	0	1	0
MID. ATL.												
New York.....	6	13	15		1	1	176	208	234	16	7	7
New Jersey.....	1	1	2		2	2	49	66	66	2	1	0
Pennsylvania.....	5	8	17				39	156	118	4	2	2
E. NO. CEN.												
Ohio.....	8	3	6	8	3	3	46	77	77	0	2	1
Indiana.....	3	3	6		1		7	11	6	0	1	1
Illinois.....	11	15	15	4	2	2	19	40	40	2	0	1
Michigan.....	3	1	5	10			37	88	88	2	0	0
Wisconsin.....	1	0	0	20	5	19	109	159	141	0	0	0
W. NO. CEN.												
Minnesota.....	0	3	2	1			13	9	14	0	0	0
Iowa.....	10	0	2				20	24	24	0	0	0
Missouri.....	4	1	1	7	1	1	8	23	2	3	0	0
North Dakota.....	0	3	3		5	2	2	5	1	0	0	0
South Dakota.....	0	5	0				12	3	1	2	0	0
Nebraska.....	0	0	1	3			3	10	2	0	0	0
Kansas.....	0	1	1		1	1	30	25	8	0	0	0
SO. ATL.												
Delaware.....	3	0	0				0	2	0	0	0	0
Maryland.....	5	3	3	1		1	70	65	13	4	2	1
Dist. of Col.....	2	1	1	1			2	11	5	1	0	0
Virginia.....	7	8	15	33	74	16	11	74	37	1	1	1
West Virginia.....	5	4	3	33	9	9	4	22	8	1	0	0
North Carolina.....	11	15	11		3	2	9	62	32	0	1	2
South Carolina.....	3	7	8	70	134	67	11	58	9	2	1	1
Georgia.....	9	15	16	5	16	5	6	59	6	0	0	0
Florida.....	3	1	2	4	4	1	6	9	4	0	0	0
E. SO. CEN.												
Kentucky.....	7	1	3		1	3	5	14	14	0	2	2
Tennessee.....	3	1	4	2	10	8	9	41	7	2	2	1
Alabama.....	4	11	11	9	16	15	10	8	8	0	1	2
Mississippi.....	3	2	9							2	2	1
W. SO. CEN.												
Arkansas.....	5	6	5	3	15	5	7	32	3	1	0	0
Louisiana.....	3	1	5	3		7	5	2	2	0	1	0
Oklahoma.....	2	0	3	15	7	7	4	15	6	1	0	0
Texas.....	19	25	25	79	320	74	29	60	36	1	1	2
MOUNTAIN												
Montana.....	0	1	1				19	1	8	0	0	0
Idaho.....	1	0	0				46	0	4	0	0	0
Wyoming.....	0	3	1	5			13	5	3	0	2	0
Colorado.....	0	6	6	11	11	6	17	23	12	0	0	0
New Mexico.....	0	0	0				4	7	7	0	0	0
Arizona.....	0	0	1	14	18	10	23	5	5	0	1	0
Utah.....	0	0	0		1	1	49	10	12	0	0	0
Nevada.....	0	0		2			16	5		0	0	
PACIFIC												
Washington.....	4	0	1				157	1	11	0	0	0
Oregon.....	2	2	1	2	4	4	21	6	15	2	2	0
California.....	10	3	16	20	32	10	164	101	101	6	0	1
Total.....	169	176	272	334	696	326	1,476	1,749	1,539	65	33	33
31 weeks.....	7,084	7,155	11,399	80,025	488,728	159,159	464,760	821,401	347,041	2,307	1,361	1,361

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended August 8, 1942, and comparison with corresponding week of 1941 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and para-typhoid fever		
	Week ended—		Med-ian 1937-41	Week ended—		Med-ian 1937-41	Week ended—		Med-ian 1937-41	Week ended—		Med-ian 1937-41
	Aug. 8, 1942	Aug. 9, 1941		Aug. 8, 1942	Aug. 9, 1941		Aug. 8, 1942	Aug. 9, 1941		Aug. 8, 1942	Aug. 9, 1941	
NEW ENG.												
Maine.....	1	0	0	8	0	2	0	0	0	1	0	
New Hampshire.....	0	1	0	3	5	2	0	0	0	1	1	0
Vermont.....	0	1	0	3	1	1	0	0	0	0	0	0
Massachusetts.....	0	4	2	49	59	31	0	0	0	4	3	2
Rhode Island.....	0	0	0	2	3	2	0	0	0	0	0	0
Connecticut.....	2	1	1	11	6	6	0	0	0	3	0	3
MID. ATL.												
New York.....	5	30	13	58	61	65	0	0	0	6	30	18
New Jersey.....	7	13	3	19	19	19	0	0	0	2	4	7
Pennsylvania.....	3	17	3	51	41	59	0	0	0	8	28	21
E. NO. CEN.												
Ohio.....	9	27	16	49	50	50	0	0	0	8	10	21
Indiana.....	2	12	7	9	8	18	0	1	1	1	3	6
Illinois.....	22	8	5	41	35	53	0	1	1	5	16	18
Michigan <sup>1</sup> .....	7	10	14	32	35	52	0	0	0	3	2	4
Wisconsin.....	0	1	0	55	34	38	0	0	1	1	0	3
W. NO. CEN.												
Minnesota.....	1	12	4	19	9	25	0	0	1	0	1	3
Iowa.....	0	0	3	11	5	6	0	0	3	3	5	5
Missouri.....	4	0	1	14	12	13	2	1	0	13	9	14
North Dakota.....	0	0	0	4	0	3	0	0	0	0	1	1
South Dakota.....	0	0	1	16	6	6	0	1	2	0	1	1
Nebraska.....	3	0	1	1	5	4	0	0	1	0	0	0
Kansas.....	3	1	4	8	12	23	0	0	1	5	7	5
SO. ATL.												
Delaware.....	0	0	0	1	0	0	0	0	0	1	0	0
Maryland <sup>1</sup> .....	0	11	2	11	9	9	0	0	0	9	11	11
Dist. of Col.....	0	2	0	7	3	1	0	0	0	0	0	0
Virginia.....	1	3	3	5	15	9	0	0	0	15	9	19
West Virginia.....	5	0	1	9	11	11	0	0	0	4	12	12
North Carolina.....	2	10	2	10	18	17	0	0	0	10	13	13
South Carolina.....	2	16	1	2	1	1	0	0	0	8	8	12
Georgia.....	1	71	5	10	6	7	0	0	0	6	27	28
Florida.....	1	13	1	0	2	4	0	0	0	2	6	4
E. SO. CEN.												
Kentucky.....	8	13	9	12	8	13	0	0	0	13	17	39
Tennessee.....	19	31	3	19	12	9	0	0	0	7	12	12
Alabama.....	2	80	1	11	14	11	0	0	0	3	13	19
Mississippi <sup>2</sup> .....	0	10	4	1	1	6	0	0	0	14	15	14
W. SO. CEN.												
Arkansas.....	6	3	3	4	2	3	0	0	0	8	15	30
Louisiana.....	1	2	2	6	0	5	0	0	0	10	8	14
Oklahoma.....	0	1	1	19	9	7	0	0	0	8	4	19
Texas.....	4	3	12	15	11	14	0	0	0	32	46	72
MOUNTAIN												
Montana.....	0	0	1	3	5	5	0	1	0	1	1	1
Idaho.....	0	0	0	0	1	2	0	0	0	0	0	0
Wyoming.....	0	0	0	7	0	3	0	0	0	0	0	1
Colorado.....	1	1	1	5	4	9	0	0	0	1	5	2
New Mexico.....	2	0	0	1	1	1	0	0	0	3	2	2
Arizona.....	1	0	0	2	5	0	0	0	0	2	2	1
Utah <sup>1</sup> .....	0	2	0	0	1	5	0	0	0	2	1	1
Nevada.....	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	0	3	1	8	8	8	0	0	0	0	0	2
Oregon.....	0	0	1	3	5	6	0	0	0	0	3	2
California.....	3	7	12	39	35	36	0	0	7	10	4	13
Total.....	128	420	278	673	593	751	2	5	34	233	355	497
31 weeks.....	*1, 149	2, 235	1, 638	87, 954	88, 639	115, 033	604	1, 138	7, 847	*3, 624	4, 119	6, 096

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended August 8, 1942, and comparison with corresponding week of 1941—Continued

Division and State	Whooping cough		Week ended Aug. 8, 1942									
	Week ended—		An- thrax	Dysentery			En- ceph- alitis, infect- ious	Lep- rosy	Rocky Mt. spot- ted fever	Tula- remia	Ty- phus fever	
	Aug. 8, 1942	Aug. 9, 1941		Ame- bic	Bacil- lary	Un- spec- ified						
NEW ENG.												
Maine	23	20	0	0	0	0	0	0	0	0	0	
New Hampshire	7	0	0	0	0	0	0	0	0	0	0	
Vermont	68	3	0	0	0	0	0	0	0	0	0	
Massachusetts	208	171	0	0	0	0	0	0	0	0	0	
Rhode Island	15	25	0	0	0	0	0	0	0	0	0	
Connecticut	56	49	0	0	6	0	0	0	0	0	0	
MID. ATL.												
New York	347	272	0	2	14	0	4	0	0	0	0	
New Jersey	215	99	0	1	0	0	0	0	3	0	0	
Pennsylvania	257	216	0	0	0	0	0	0	0	0	0	
E. NO. CEN.												
Ohio	260	435	0	0	0	4	1	0	0	0	0	
Indiana	46	21	0	0	0	0	0	0	1	0	0	
Illinois	334	204	0	3	49	0	1	0	2	1	0	
Michigan <sup>1</sup>	177	309	0	0	0	0	0	0	0	0	0	
Wisconsin	242	233	0	0	0	0	0	0	0	0	0	
W. NO. CEN.												
Minnesota	67	58	0	2	0	0	0	0	0	0	0	
Iowa	32	48	0	0	0	0	0	0	2	0	0	
Missouri	11	9	0	0	0	0	1	0	1	1	0	
North Dakota	11	2	0	0	0	0	0	0	0	0	0	
South Dakota	0	4	0	0	0	0	0	0	0	0	0	
Nebraska	6	13	0	0	0	0	0	0	0	0	0	
Kansas	57	101	0	0	0	0	1	0	0	0	0	
SO. ATL.												
Delaware	2	0	0	0	0	0	0	0	0	0	0	
Maryland <sup>1</sup>	60	74	0	0	0	9	0	0	12	0	0	
Dist. of Col.	24	21	0	0	0	0	0	0	0	0	0	
Virginia	40	81	0	0	0	351	0	0	3	0	0	
West Virginia	11	43	0	0	0	0	0	0	0	0	0	
North Carolina	85	158	0	0	0	0	0	0	4	0	2	
South Carolina	52	124	0	0	0	0	0	0	1	0	13	
Georgia	13	37	1	0	8	0	0	0	0	1	34	
Florida	8	19	0	0	1	0	0	0	0	1	12	
E. SO. CEN.												
Kentucky	101	60	0	1	12	0	0	0	1	0	0	
Tennessee	27	27	0	1	0	25	0	0	5	4	0	
Alabama	7	4	0	0	0	0	0	0	1	0	11	
Mississippi <sup>2</sup>			0	0	0	0	0	0	0	1	1	
W. SO. CEN.												
Arkansas	8	4	0	1	3	0	0	0	0	2	0	
Louisiana	2	15	0	3	6	0	0	1	1	0	1	
Oklahoma	7	22	0	0	0	18	0	0	0	0	0	
Texas	134	132	0	12	150	0	0	1	0	0	41	
MOUNTAIN												
Montana	34	26	0	0	0	0	1	0	1	1	0	
Idaho	7	46	0	0	0	0	0	0	0	0	0	
Wyoming	4	10	0	0	0	0	0	0	1	5	0	
Colorado	30	110	0	0	0	0	1	0	0	0	0	
New Mexico	12	4	0	0	2	0	0	0	0	0	0	
Arizona	12	14	0	0	0	21	0	0	0	0	0	
Utah <sup>3</sup>	16	33	0	0	0	0	0	0	0	3	0	
Nevada	13	4	0	0	0	0	0	0	1	1	0	
PACIFIC												
Washington	64	81	0	0	0	0	4	0	0	0	0	
Oregon	16	14	0	0	0	0	0	0	1	0	0	
California	185	293	0	0	8	0	0	0	0	1	0	
Total	3,413	3,748	1	26	259	428	14	2	41	22	115	
31 weeks	116,280	139,971										

<sup>1</sup> New York City only.

<sup>2</sup> Period ended earlier than Saturday.

<sup>3</sup> A later report shows 10 cases of diphtheria and 1 case of typhoid fever in Washington for the week ended July 11, instead of 1 case of diphtheria and 0 cases of typhoid fever as previously reported.

<sup>4</sup> Delayed report, week ended Aug. 1, Oklahoma, 1 case.

## WEEKLY REPORTS FROM CITIES

City reports for week ended July 25, 1942

This table lists the reports from 90 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Enecephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
Atlanta, Ga.	0	0	7	0	0	0	1	0	0	0	0	8
Baltimore, Md.	5	0	1	0	0	9	11	0	6	0	1	40
Barre, Vt.	0	0		0	0	0	0	0	0	0	0	0
Billings, Mont.	0	0		0	7	0	0	0	0	0	0	3
Birmingham, Ala.	1	0		0	0	0	2	0	0	0	1	3
Boise, Idaho	0	0		0	0	0	0	0	0	0	0	0
Boston, Mass.	6	0	1		40	0	6	3	19	0	1	36
Bridgeport, Conn.	0	0		0	1	0	0	0	1	0	0	1
Brunswick, Ga.	0	0		0	0	0	0	0	0	0	0	0
Buffalo, N. Y.	0	0		0	4	3	4	0	3	0	2	21
Camden, N. J.	1	0		0	0	0	0	0	0	0	0	0
Charleston, S. C.	0	0		1	1	0	2	3	0	0	0	0
Charleston, W. Va.	0	0		0	0	0	0	0	0	0	0	0
Chicago, Ill.	9	0		1	11	0	23	5	13	0	1	261
Cincinnati, Ohio	1	0		0	1	0	7	0	11	0	4	21
Cleveland, Ohio	0	0	7	0	7	0	2	0	1	0	0	56
Columbus, Ohio	0	0		0	3	0	2	0	2	0	0	7
Concord, N. H.	0	0		0	0	0	0	0	0	0	0	0
Cumberland, Md.	0	0		0	0	0	0	0	0	0	0	0
Dallas, Tex.	1	0		0	1	0	4	0	0	0	2	13
Denver, Colo.	1	0		0	16	0	4	0	2	0	1	9
Detroit, Mich.	1	0		0	15	0	7	1	21	0	0	128
Duluth, Minn.	0	0		0	3	0	0	0	2	0	0	4
Fall River, Mass.	1	0		0	1	0	0	0	2	0	0	1
Fargo, N. Dak.	0	0		0	0	0	0	0	1	0	0	0
Flint, Mich.	0	0		0	0	0		0	1	1	0	1
Fort Wayne, Ind.	0	0		0	0	0	1	0	0	0	0	5
Frederick, Md.	0	0		0	0	0	0	0	0	0	0	0
Galveston, Tex.	0	0		0	0	0	1	0	0	0	0	5
Grand Rapids, Mich.	0	0		0	2	0	0	0	0	0	0	4
Great Falls, Mont.	0	0		0	0	0	1	0	0	0	0	1
Hartford, Conn.	0	0		0	10	0	0	0	0	0	0	14
Helena, Mont.	0	0		0	1	0	1	0	0	0	0	7
Houston, Tex.	3	0		0	1	0	7	0	1	0	4	7
Indianapolis, Ind.	2	0		0	8	0	6	2	0	0	0	24
Kansas City, Mo.	0	0		0	5	0	2	0	4	0	0	10
Kenosha, Wis.	0	0		0	4	0	0	0	0	0	0	18
Little Rock, Ark.	0	0		0	3	0	0	0	0	0	0	0
Los Angeles, Calif.	4	0	1	0	35	0	6	0	3	0	0	21
Lynchburg, Va.	0	0		0	1	0	2	0	0	0	0	4
Memphis, Tenn.	0	0		0	0	0	7	4	0	0	1	20
Milwaukee, Wis.	0	0	1	1	110	0	2	0	1	0	0	34
Minneapolis, Minn.	1	0		0	2	0	0	0	13	0	0	6
Missoula, Mont.	0	0		0	0	0	0	0	0	0	0	0
Mobile, Ala.	0	0	1	0	0	0	4	0	0	0	0	0
Nashville, Tenn.	0	0		0	5	0	3	1	3	0	2	3
Newark, N. J.	0	0		0	25	0	7	0	6	0	0	50
New Haven, Conn.	0	0	1	0	3	0	1	0	0	0	0	4
New Orleans, La.	0	0	2	0	3	0	8	0	2	0	4	2
New York, N. Y.	4	5	4	0	31	5	54	1	33	0	2	156
Omaha, Nebr.	0	0		0	2	0	3	0	1	0	0	0
Philadelphia, Pa.	0	0		0	15	2	21	0	15	0	1	105
Pittsburgh, Pa.	4	0		0	0	0	11	0	4	0	0	25
Portland, Maine	0	0		0	9	2	1	0	0	0	0	3
Providence, R. I.	0	0		0	33	0	1	0	0	0	0	17

## City reports for week ended July 25, 1942—Continued

	Diphtheria cases	Etiophalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
Pueblo, Colo.	0	0		0	0	0	1	0	0	0	0	1
Racine, Wis.	0	0		0	3	0	1	0	4	0	0	14
Raleigh, N. C.	0	0		0	0	0	2	0	0	0	0	3
Reading, Pa.	0	0		0	0	1	0	0	0	0	0	12
Richmond, Va.	0	0		0	4	0	6	0	0	0	0	1
Roanoke, Va.	0	0		0	0	0	0	0	0	0	1	0
Rochester, N. Y.	0	0		0	1	0	2	1	2	0	0	10
Sacramento, Calif.	0	0		0	1	0	1	0	7	0	0	3
Saint Joseph, Mo.	0	0		0	0	0	4	0	0	0	0	0
Saint Louis, Mo.	0	0	1	0	7	0	4	2	4	1	0	17
Saint Paul, Minn.	0	0		0	7	0	0	0	5	0	0	15
Salt Lake City, Utah	0	0		0	40	0	0	0	2	0	0	8
San Antonio, Tex.	0	0	2	1	1	0	2	0	1	0	0	0
San Francisco, Calif.	0	0		0	51	1	6	0	3	0	0	6
Savannah, Ga.	0	0		1	0	0	1	0	1	0	0	1
Seattle, Wash.	1	0		1	56	0	4	0	0	0	0	10
Shreveport, La.	2	0		0	0	0	2	1	1	0	3	0
South Bend, Ind.	0	0		0	0	0	0	0	0	0	0	8
Spokane, Wash.	0	0		0	22	0	1	0	0	0	0	12
Springfield, Ill.	0	0		0	1	0	0	0	0	0	1	3
Springfield, Mass.	0	0		0	6	0	1	0	4	0	0	3
Superior, Wis.	0	0		0	1	0	0	0	0	0	0	2
Syracuse, N. Y.	0	0		0	88	1	1	0	1	0	2	46
Tacoma, Wash.	0	0		0	8	0	1	0	1	0	0	3
Tampa, Fla.	0	0		0	2	0	4	0	0	0	0	4
Terre Haute, Ind.	0	0		0	0	0	1	0	0	0	0	0
Topeka, Kans.	0	0		0	1	0	0	0	0	0	0	2
Trenton, N. J.	0	0	1	0	0	0	3	0	1	0	0	2
Washington, D. C.	0	0		0	8	0	13	0	7	0	0	21
Wheeling, W. Va.	0	0		0	4	1	0	0	2	0	0	9
Wichita, Kans.	0	0		0	7	0	0	0	1	0	0	5
Wilmington, Del.	0	0		0	1	0	2	0	2	0	0	1
Wilmington, N. C.	0	0		0	0	0	4	0	0	0	0	16
Winston-Salem, N. C.	0	0		0	0	0	2	0	0	0	1	3
Worcester, Mass.	0	0		0	1	0	4	0	6	0	0	40

*Dysentery, amebic.*—Cases: Detroit, 2; Los Angeles, 1; New York, 4; Wichita, 1.

*Dysentery, bacillary.*—Cases: Atlanta, 1; Baltimore, 3; Nashville, 5; New York, 2; Philadelphia, 1; Richmond, 3; St. Louis, 1.

*Rocky Mountain spotted fever.*—Cases: Cincinnati, 1; Nashville, 1.

*Typhus fever.*—Cases: Charleston, S. C., 1; Galveston, 1; New Orleans, 3; New York, 1; San Antonio, 1; Savannah, 1.

*Rates (annual basis) per 100,000 population, for the group of 90 cities in the preceding table (estimated population, 1942, 34,134,198)*

Period	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
		Cases	Deaths						
Week ended July 25, 1942...	7.33	4.58	0.92	114.42	45.52	34.52	0.31	5.35	219.82
Average for week, 1937-41...	10.19	4.17	1.54	140.18	39.99	45.54	0.46	7.26	213.98

<sup>1</sup> Median.



## PLAGUE INFECTION IN CALIFORNIA AND NEVADA

Plague infection has been reported in specimens collected in California and Nevada as follows:<sup>1</sup>

## CALIFORNIA

Monterey County: June 26, in a pool of 103 fleas from 20 ground squirrels, *C. beecheyi*, taken in the northern part of the Fort Ord Military Reservation.

San Bernardino County: In pools of fleas as follows: April 6, 17 fleas from 6 desert antelope squirrels, *Ammospermophilus leucurus*, taken on the Helendale Airport, 14 miles northeast of Helendale; April 14, 12 fleas from 7 squirrels, same species, taken 25 miles northwest of Needles; and May 15, 14 fleas from 12 wood rats, *Neotoma*, sp., taken at the Fawnskin Resort, 4 miles northwest of Big Bear Lake.

San Diego County: May 4, in a pool of 154 fleas from 8 ground squirrels, *C. fisheri*, taken on the premises of the Scripps Institute at La Jolla.

San Luis Obispo County: In pools of fleas from ground squirrels, *C. beecheyi*, as follows: May 27, 187 fleas from 17 squirrels taken on the Newhall Land and Farming Co. property, 8 miles northeast of Santa Maria (Alamo Creek), and June 9, 158 fleas from 3 squirrels taken 12 miles southeast of Arroyo Grande.

Santa Barbara County: June 11, in a pool of 91 fleas from 5 ground squirrels, *C. beecheyi*, taken in the Santa Barbara County Pioneer Park, 12 miles northeast of Santa Maria.

Santa Clara County: In pools of fleas from ground squirrels, *C. beecheyi*, as follows: April 7, 180 fleas from 14 squirrels taken 1 mile north of Calero Dam; April 8, 49 fleas from 5 squirrels taken 5 miles west of Morgan Hill, and 201 fleas from 14 squirrels taken 3 miles southwest of Morgan Hill; April 9, 14 fleas from 16 squirrels taken 2½ miles northwest of Gilroy; April 10, 200 fleas from 14 squirrels taken ½ mile north of Calero Dam.

## NEVADA

Washoe County: July 10, in a pool of tissue from 32 ground squirrels, *C. townsendii*, taken 21 miles southeast of Doyle, Calif.

## TERRITORIES AND POSSESSIONS

## Hawaii Territory

*Plague (rodent).*—Rats proved positive for plague have been reported in Hawaii Territory as follows: Week ended June 26, 1942, 2 rats in Hamakua, Paauhau area, Hamakua District, Island of Hawaii; week ended July 18, 1942, 1 rat in Honokaa, Paauhau area, Hamakua District, Island of Hawaii.

<sup>1</sup> Dates are those on which the specimens were collected.

## FOREIGN REPORTS

### CANADA

*Provinces—Communicable diseases—Week ended July 11, 1942.*—During the week ended July 11, 1942, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis	1		1	2	3				1	8
Chickenpox		1		65	138	19	25	13	42	303
Diphtheria		6		18	1	1		2	2	30
Dysentery				35						35
German measles		3		2	26	2	2		4	39
Influenza		5			3				4	12
Measles		1	1	80	210	36	7	8	5	348
Mumps		10		49	179	24	51	5	167	485
Pneumonia		3			7	1			4	19
Poliomyelitis		2	2			2				6
Scarlet fever		0	18	35	90	14	10	44	18	238
Smallpox								1		2
Tuberculosis		9	17	52	40	197	37	3	42	297
Typhoid and paratyphoid fever			1	23	1		1	1	1	28
Undulant fever				1	2					3
Whooping cough		4	2	185	50	4	2		18	265
Other communicable diseases	2	6			238	43		1	7	297

<sup>1</sup> For 4 weeks ended July 15, 1942.

*Vital statistics—Year 1941.*—There were 22.3 live births per 1,000 population during the year 1941. The death rate was 10.0 per 1,000 population. The infant mortality rate was 60 per 1,000 live births, while the maternal death rate was 3.5 per 1,000 live births.

The accompanying tables give the number of births, deaths, and marriages by Provinces, for 1941 and deaths by causes and Provinces for 1941:

*Number of births, deaths, and marriages, year 1941*

Province	Live births	Deaths (exclusive of stillbirths)	Deaths under 1 year of age	Maternal deaths	Marriages
Canada <sup>1</sup>	253,991	114,216	15,168	891	121,781
Prince Edward Island	2,018	1,125	162	6	671
Nova Scotia	13,623	6,815	894	45	6,575
New Brunswick	12,229	5,166	931	42	4,938
Quebec	88,544	34,250	6,749	382	32,763
Ontario	72,177	39,179	3,290	219	43,276
Manitoba	14,812	6,495	788	46	8,305
Saskatchewan	18,451	6,458	946	58	7,033
Alberta	17,190	6,247	859	53	8,467
British Columbia	14,947	8,481	549	40	9,753

<sup>1</sup> Exclusive of Yukon and the Northwest Territories.

## Deaths by cause and Province, year 1941

Cause of death	Canada <sup>1</sup>	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
All causes	114,216	1,125	6,815	5,166	34,250	39,179	6,495	6,458	6,247	8,481
Cancer and other malignant tumors	13,362	108	780	479	3,508	4,929	863	814	687	1,194
Diarrhea and enteritis	2,314	6	78	97	1,368	411	104	115	97	38
Diphtheria	240	5	53	7	134	14	7	12	6	2
Diseases of the heart	26,533	213	1,348	962	5,706	11,667	1,467	1,416	1,378	2,376
Diseases of the arteries	2,264	28	140	120	498	944	200	101	85	148
Homicides	125	1	11	2	30	39	8	5	14	15
Influenza	2,399	28	154	120	1,016	465	106	219	174	117
Measles	324	6	65	49	81	43	10	30	30	10
Motor vehicle accidents	1,843	8	102	89	482	834	79	46	77	126
Nephritis	7,378	89	381	250	3,446	2,006	266	321	248	371
Pneumonia	5,931	80	458	441	1,875	1,674	334	350	309	350
Polio-myelitis	66		4	19	3	10	20	3	6	1
Puerperal causes	891	6	45	42	382	219	46	58	53	40
Scarlet fever	115	1	9	2	44	38	6	7	6	2
Suicides	891	4	38	31	139	314	65	83	102	115
Tuberculosis	6,039	70	423	314	2,678	1,097	328	286	319	524
Typhoid and paratyphoid fever	165		2	16	103	23	1	12	5	3
Other violent deaths	5,535	44	353	187	1,220	2,104	336	329	425	537
Other specified causes	27,631	274	1,603	1,264	9,180	8,220	1,682	1,723	1,591	1,824
Unspecified causes	1,000	53	144	256	257	100	56	38	56	40
Whooping cough	436	7	15	20	234	100	9	20	23	8

<sup>1</sup> Exclusive of Yukon and the Northwest Territories.

## CHILE

*Antofagasta Province—Cerebrospinal meningitis.*—For the period January 1 to July 15, 1942, a total of 86 cases of cerebrospinal meningitis with 18 deaths were reported in Antofagasta Province, Chile.

## JAMAICA

*Communicable diseases—4 weeks ended July 4, 1942.*—During the 4 weeks ended July 4, 1942, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox	8	9	Puerperal fever		2
Diphtheria	2	3	Tuberculosis	33	80
Dysentery		2	Typhoid fever	6	39
Erysipelas	2		Typhus fever	2	2
Leprosy		1			

## REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

**Typhus Fever**

*Morocco.*—Typhus fever has been reported in Morocco as follows: Week ended July 4, 1942, 693 cases; week ended July 18, 1942, 394 cases.

*Rumania.*—During the week ended July 25, 1942, 11 cases of typhus fever were reported in Rumania.

*Tunisia.*—For the period July 1-10, 1942, 411 cases of typhus fever were reported in Tunisia.

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